

REMARKS

Status of the Claims

After entry of the instant Amendment, claims 1-4, 6-17, 20 and 21 are pending in the present application. Claims 1, 7, 13, 14, and 16 are independent. Claims 11-17 stand withdrawn as being drawn to nonelected subject matter.

Claims 1, 6-13, 20 and 21 have been amended. Support for the claim amendments can at least be found at paragraphs [0050], [0051], [0065] and [0066]; and Figures 11 and 20 of the specification.

Reconsideration of this application, as amended, is respectfully requested.

Request for Entry of Response After Final Rejection

This response should be entered after final rejection because it is believed to automatically place the claims in condition for allowance.

In the event that the Examiner disagrees and finds that this response does not place this application into condition for allowance, the Examiner is requested to enter this response because it places the application into better condition for appeal.

Request for Withdrawal of Finality of Office Action

Applicants respectfully submit that the Examiner failed to address patentability arguments provided by Applicants in the Response filed December 13, 2010, distinguishing the claimed invention over the teachings of **Tsuura**, U.S. Patent Application Publication No. 2004/0069429 (hereinafter "**Tsuura**").

Applicants respectfully pointed out in the Amendment filed December 13, 2010, that **Tsuura** teaches away from making molded elements that have thicker parts (*e.g.*, ridges or pleats), instead teaching molded elements having a uniform thickness. Thus, at page 2, in paragraph [0025], where **Tsuura** discusses the preferred length of the inorganic fiber in his molded elements, **Tsuura** teaches that "[w]here the inorganic fiber has too long an average length, the slurry tends to fail to produce a molded article with uniform wall thickness and may have difficulty in producing a hollow molded element." Applicants also argued that **Tsuura**'s intent is to produce a molded element having a uniform wall thickness, and to achieve his goal, **Tsuura** requires use of an inorganic fiber within a specified range (*e.g.*, 0.2 to 10 mm).

Further at page 4 in paragraph [0052], **Tsuura** teaches “the solid content of the slurry is accumulated on the screen covering the cavity wall to build up a fiber layer with uniform thickness... the slurry in the cavity is uniform in concentration to deposit a fiber layer on the screen uniformly” (emphasis added). Thus, Applicants argued in the Amendment filed December 13, 2010, that **Tsuura** teaches away from a mold designed to create a thick-walled part (e.g., ridge or pleat).

In view of the Examiner’s lack of response to the arguments presented in the Amendment filed December 13, 2010, Applicants respectfully request withdrawal of the finality of the previous Office Action.

Priority under 35 U.S.C. § 119

Applicants thank the Examiner for acknowledging Applicants' claim for foreign priority under 35 U.S.C. § 119, and receipt of certified copies of the priority documents.

Information Disclosure Citation

Applicants thank the Examiner for considering the references cited in the Information Disclosure Statement filed May 10, 2010, and for providing Applicants with an initialed copy of the PTO-SB08 form filed therewith.

Drawings

Applicants thank the Examiner for indicating that the drawings are accepted.

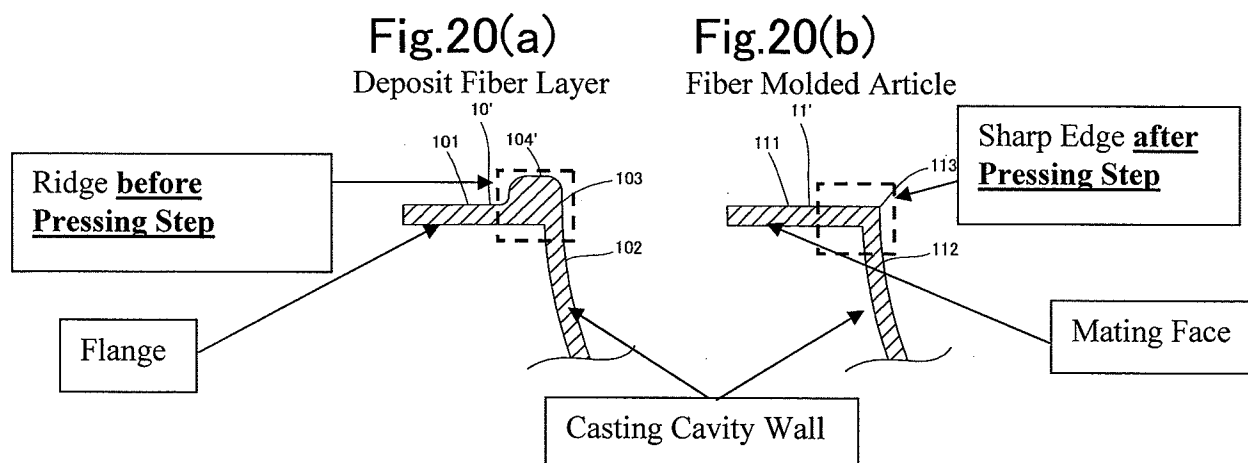
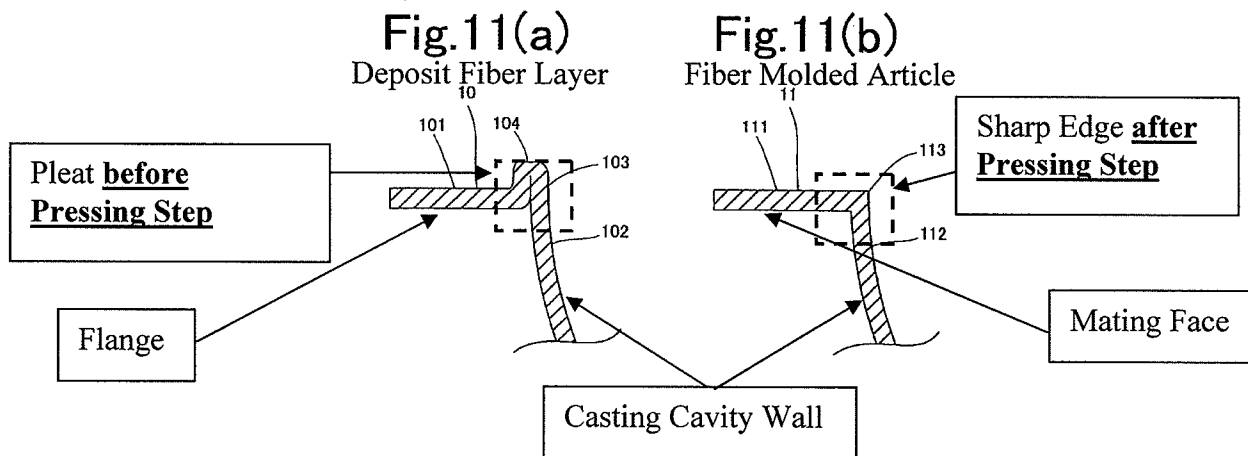
Examiner Interview

Applicants wish to thank the Examiner for the courtesies extended to Applicant's representative during the interview which was conducted on April 22, 2011. An Examiner Interview Summary was made of record as of April 29, 2011. Proposed changes to the claims were discussed in an attempt to better define the invention and distinguish the invention over cited art of record. The claims have been amended in a manner consistent with discussions during the interview, and are believed to place the application into condition for allowance. Accordingly, reconsideration and allowance of the present application are respectfully requested.

Rejection under 35 U.S.C. § 103(a)

Claims 1-4, 6-10, 20 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over **Tsuura**, U.S. Patent Application Publication No. 2004/0069429 (hereinafter "**Tsuura**"). This rejection is respectfully traversed.

During the interview, it became evident that the Examiner is of the opinion that the term "thick-walled part" previously recited in the claims is unclear/indefinite. While Applicants respectfully disagree with this assertion, Applicants have amended the claims to refer to a "ridge" and/or a "pleat" instead. Applicants have reproduced Figures 11(a)-(b) and 20(a)-(b) below showing a pleat and a ridge.



Independent claims 1 and 7 recite methods for producing a fiber molded article having a casting cavity and a mating face with a sharp edge where the casting cavity and the mating face meet. Referring to Figures 10, 11(a) and 11(b), the fiber deposit layer 10 has a casting cavity 102 and a flange 101 with an edge 103 where the casting cavity 102 and flange 101 meet. The fiber deposit layer has a pleat at or near the edge 103 shown in Figure 11(a) (or a ridge at or near the edge 103 shown in Figure 20(a). The ridge or pleat has a width of 3 to 6 mm and a thickness of 1 to 20 mm. In the claimed methods the fiber deposit layer 10 is pressed at the pleat at edge 103 in Figure 11(a) and the pleat is flattened to form a sharp edge 103 in Figure 11(b) or at the ridge at edge 103 in Figure 20(a) and the ridge is flattened to form a sharp edge 103 in Figure 20(b), thereby producing the fiber molded article. The sharp edge 103 in Figure 11(b)/20(b) is located where the casting cavity 102 and the flange 101 meet and the flange 101 acts as a mating face (element 111 in Figure 12(b)) when the fiber molded article is joined at its sharp edge (element 113 in Figure 12(b)) with a mating face of a second fiber molded article. Further, the sharp edge has a density of 0.8g/cm^3 or greater.

As explained at the top of page 6 of the Specification, Figure 23 (see below) illustrates the problem associated when joining fiber molded articles produced using conventional techniques. As shown in Figure 23, because the edge 113 prepared by conventional methods is not sharp, when two fiber molded articles prepared by conventional methods are joined together there is gap between the two articles. In contrast, when two fiber molded articles produced by claimed methods are joined together, as illustrated in Figure 12(b) (below), the edges 113 are sharp and there is little or no gap between the joined fiber molded articles.

Fig.23

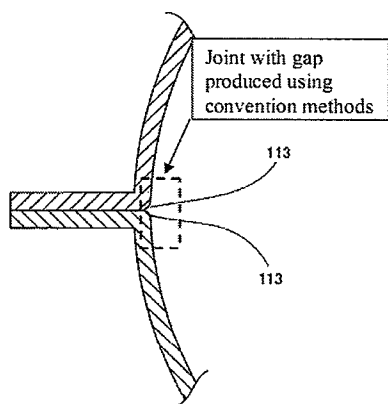
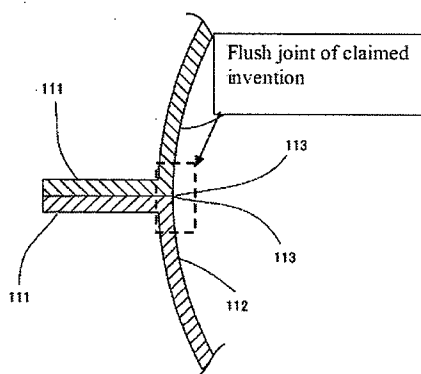
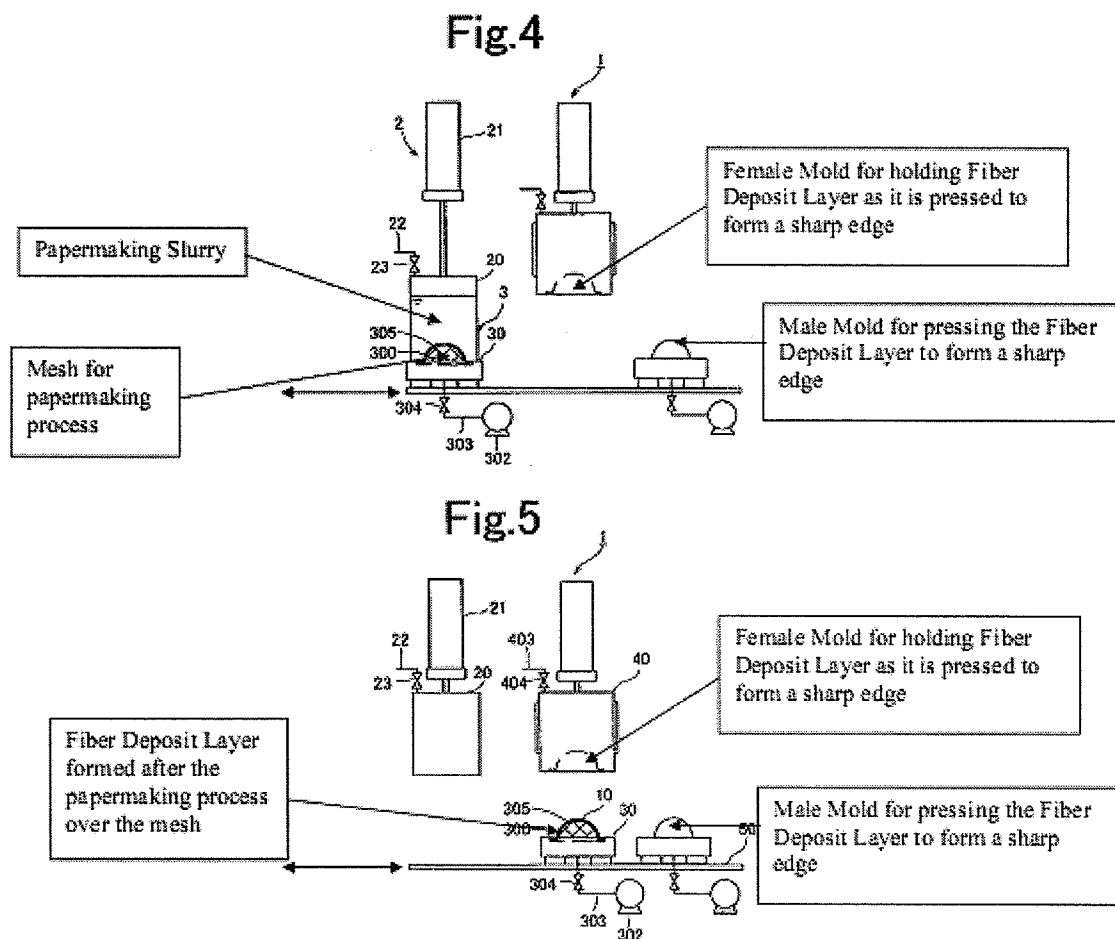


Fig.12(b)



In the claimed invention, the fiber deposit layer (*i.e.*, element 10 in Figure 10) is prepared by a papermaking process and the fiber deposit layer comprises a fiber material. The pleat or ridge (*i.e.*, element 103 in Figures 11(a) and 20(a)) in the fiber deposit layer 10 is formed in a recess having a depth of 1 to 20 mm of a papermaking mold used in the papermaking process. For example, in Figure 6, the papermaking mold 30 has a recess 310 that permits the thick-walled part (a ridge or a pleat) 104 to be formed, as recited in the claims.

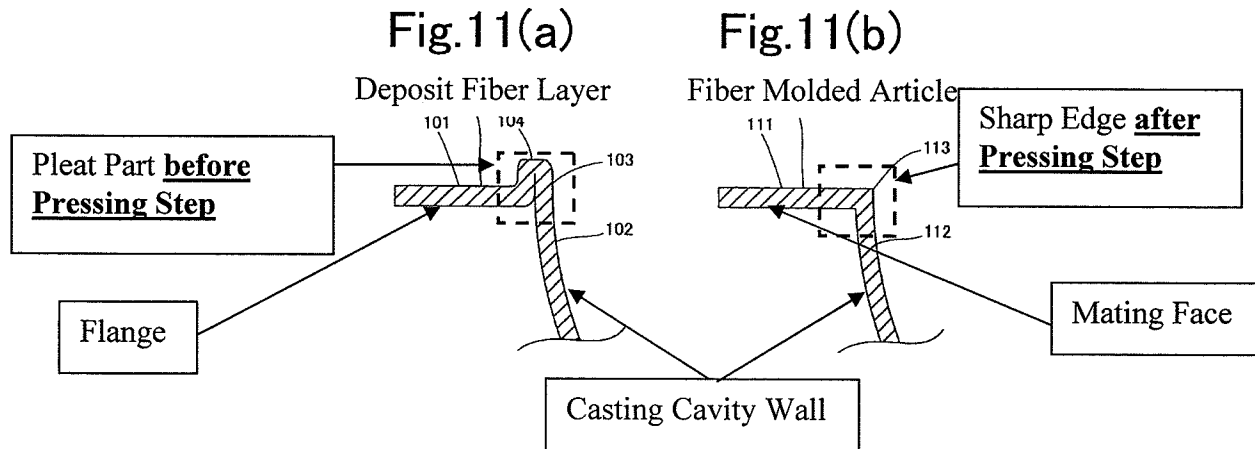
The claimed methods can be better understood by reference to Figures 4 and 5 below showing one possible method.



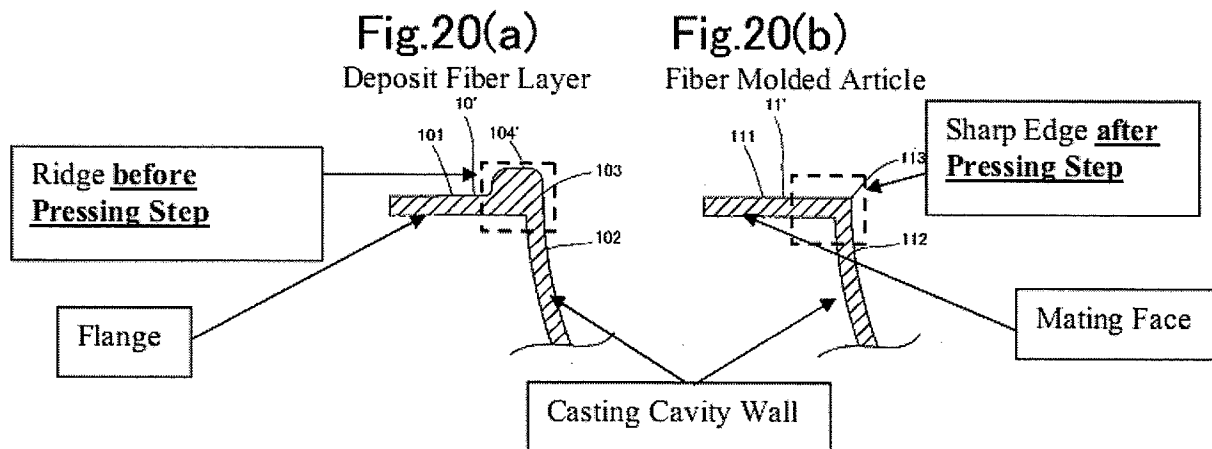
A fiber deposit layer is prepared by applying a papermaking slurry over a papermaking mold (*i.e.*, with a mesh). A fiber deposit layer produced by the papermaking process is positioned

under a female mold and the fiber deposit layer is transferred to the female mold. The female mold containing the fiber deposit layer is pressed to the male mold.

After the papermaking process, the fiber deposit layer has a ridge or pleat at or near an edge located where the casting cavity and the flange meet.



As can be seen in Figures 11(a) and 11(b) above, a fiber deposit layer having a pleat at or near an edge that is formed by a papermaking process. As recited in the claims the fiber deposit layer comprises a casting cavity and a flange, the edge is located where the casting cavity and the flange meet. The pleat at or near the edge is pressed to form a sharp edge thereby producing the fiber molded article. The flange acts as a mating face when the fiber molded article is joined with a mating face of a second fiber molded article.



As can be seen in Figures 20(a) and 20(b) above, a fiber deposit layer having a ridge at or near an edge that is formed by a papermaking process. As recited in the claims the fiber deposit layer comprises a casting cavity and a flange, the edge is located where the casting cavity and the flange meet. The ridge at or near the edge is pressed to form a sharp edge thereby producing the fiber molded article. The flange acts as a mating face when the fiber molded article is joined with a mating face of a second fiber molded article.

The Examiner has alleged that **Tsuura** teaches a “formed article has a sharp edge that has a thick-walled part, as for example shown in Figure 1 (entire document and Figures 1-4).” It further has been alleged that **Tsuura** teaches “a papermaking mold in the method of making the article. The mold includes a pair of splits that are joined together wherein the slurry is placed. The mold is designed to create a thick walled part as shown in the resulting product of Figure 1.” Applicants respectfully disagree with these allegations.

Applicants respectfully point out that **Tsuura** teaches away from making molded elements that have thicker parts (*e.g.*, ridges or pleats), instead teaching molded elements having a uniform thickness. Thus, at page 2, in paragraph [0025], where **Tsuura** discusses the preferred length of the inorganic fiber in his molded elements, **Tsuura** teaches that “[w]here the inorganic fiber has too long an average length, the slurry tends to fail to produce a molded article with uniform wall thickness and may have difficulty in producing a hollow molded element.” Thus, **Tsuura’s** intent is to produce a molded element having a uniform wall thickness, and to achieve his goal, **Tsuura** requires use of an inorganic fiber within a specified range (*e.g.*, 0.2 to 10 mm).

Further at page 4 in paragraph [0052], **Tsuura** teaches “the solid content of the slurry is accumulated on the screen covering the cavity wall to build up a fiber layer with uniform thickness... the slurry in the cavity is uniform in concentration to deposit a fiber layer on the screen uniformly” (emphasis added). Thus, **Tsuura** teaches away from a mold designed to create a thick-walled part, such as a ridge or a pleat.

Tsuura fails to teach each and every element of the claimed invention. Specifically, **Tsuura** does not teach a ridge or pleat that is formed in a recess having a depth of 1 to 20 mm of a papermaking mold and that has a width of 3 to 6 mm and a thickness of 1 to 20 mm or that the ridge or pleat is flattened by pressing to produce a sharp edge having a density of 0.8 g/cm³ or greater.

In view of the claim amendments and the discussion above, Applicants respectfully request that the rejection of claims 1-4, 6-10, 20 and 21 as being unpatentable over **Tsuura** be withdrawn.

CONCLUSION

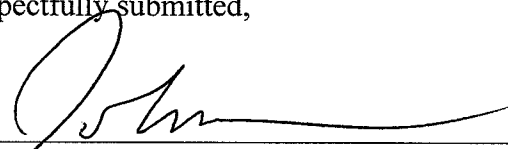
All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application; the Examiner is respectfully requested to contact Stephanie A. Wardwell, PhD, Registration No. 48,025, at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

Dated: **JUN 2 2011**

Respectfully submitted,

By 

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